ABSTRACT

A data input means inputs boundary data of an object to a computer, a data converting means converts the boundary data into a triangle patch having a phase, an associating means divides a space into rectangular parallelepiped cells having boundary planes intersecting perpendicularly and associates the cell with a triangle to be included in the cell, a dividing/arranging means divides a triangle patch having a phase and floating in the space at cell faces and keeps all triangles arranged within and on the boundaries of cells, a ridge line integrating means integrates ridges that do not alter the phase, a cell assigning means assigns each triangle and its vertex to a cell with reference to index data of the vertex, and a labeling means sets an attribute value of each cell.